

**ABSTRACT**

A system for monitoring a communications circuit includes at least one impedance element connected to the communications circuit when the communications circuit is established. Communication devices communicating via the communications circuit adapt to the presence of the at least one impedance element. Each impedance element is switchably connected to a respective reference ground point. The system includes at least one monitor access element configured as a virtual reference ground point. Each impedance element is switchably disconnected from a respective monitor access element. The system includes at least one communications circuit monitor connected to the respective monitor access element. To monitor the communications circuit, the at least one impedance element is switchably connected to the respective monitor access element and switchably disconnected from the respective reference ground point. The communications circuit monitor is thereby connected to the communications circuit without disrupting data communication within the communications circuit.